

Title (en)

CARBON DIOXIDE NANO-ELECTRONIC SENSOR

Title (de)

NANOELEKTRONISCHER KOHLENDIOXIDSENSOR

Title (fr)

CAPTEUR NANO-ELECTRONIQUE DE DIOXYDE DE CARBONE

Publication

EP 1664724 A2 20060607 (EN)

Application

EP 04788761 A 20040913

Priority

- US 2004030136 W 20040913
- US 50248503 P 20030912
- US 50466303 P 20030918

Abstract (en)

[origin: WO2005026694A2] An electronic system and method for detecting carbon dioxide is provided, using a nanostructure sensing device (CO₂ sensor). The CO₂ sensor is made up of a substrate and a nanostructure disposed over the substrate. The nanostructure may comprise a carbon nanotube, or a network of nanotubes. Two conductive elements are disposed over the substrate and electrically connected to the nanotube. A gate electrode may be positioned opposite the nanostructure. A functionalization material reactive with carbon dioxide is disposed on CO₂ sensor, and in particular, on the nanotube. The CO₂ sensor may be connected to an electrical circuit, which will respond to changes in CO₂ concentration in the ambient sensor environment.

IPC 1-7

G01N 1/00

IPC 8 full level

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CPC (source: EP US)

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Cited by

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